

IN THE CLAIMS

Please amend the claims as follows:

1-17. canceled

18. (currently amended) A method for organizing instructions within an application program to be executed in a processor having a plurality of interconnected computation nodes, said method comprising:

partitioning said application program into a plurality of instruction groups of instructions; and

assigning a group of instructions selected from the plurality of groups of instructions to a plurality each of said instruction groups to a respective set of said interconnected preselected computation nodes such that results yielded by an instruction within one of said instruction groups are sent directly to an instruction within another one of said instruction groups or an output operand associated with an instruction within one of said instruction groups is directly written to a register file to be read by an instruction within another one of said instruction groups as an input operand;

loading the group of instructions to the plurality of interconnected preselected computation nodes; and

executing the group of instructions as each one of the instructions in the group of instructions receives all necessary associated operands for execution.

19. (currently amended) The method of claim 18, wherein said partitioning and assigning are performed by a compiler at least one computation node included in the plurality of interconnected preselected computation nodes has at least one input port capable of being coupled to at least one preselected first other computation node included in the plurality of interconnected preselected computation nodes, the input port to receive input data, a first store coupled to the at least one input port to store the input data, a second store coupled to an instruction sequencer, the second store to receive and store the at least one instruction, an instruction wakeup unit to match the

~~input data to the at least one instruction, at least one execution unit to execute the at least one instruction using the input data to produce output data, at least one output port capable of being coupled to at least one second other preselected computation node included in the plurality of interconnected preselected computation nodes, and a router to direct the output data from the at least one output port to the at least one preselected second other computation node.~~

20. (currently amended) The method of claim 18, wherein said partitioning and assigning are performed by a run-time trace mapper at least one of the plurality of groups of instructions is a basic block.

21-27. canceled

28. (currently amended) An article comprising a machine-accessible computer storage medium having associated information, wherein the information, when accessed, results in a machine performing a computer program product for expressing dependency relationship of instructions within a program, said computer storage medium comprising:

computer program code for partitioning said application program into a plurality of instruction groups of instructions; and

computer program code for assigning a group of instructions selected from the plurality of groups of instructions to a plurality each of said instruction groups to a respective set of said interconnected preselected computation nodes such that results yielded by an instruction within one of said instruction groups are sent directly to an instruction within another one of said instruction groups or an output operand associated with an instruction within one of said instruction groups is directly written to a register file to be read by an instruction within another one of said instruction groups as an input operand;

loading the group of instructions to the plurality of interconnected preselected computation nodes; and

~~executing the group of instructions as each one of the instructions in the group of instructions receives all necessary associated operands for execution.~~

29. (currently amended) The ~~article~~ computer storage medium of claim 28, wherein partitioning the program into the plurality of groups of instructions is performed by a compiler.

30. (currently amended) The ~~article~~ computer storage medium of claim 28, wherein partitioning the program into the plurality of groups of instructions is performed by a run-time trace mapper.

31-36. canceled